

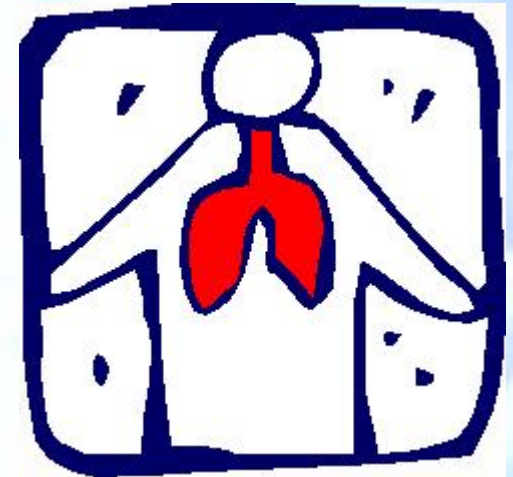
# **Alamo Area Air Quality and Regulatory Landscape**



**June 2, 2003  
Distributed Energy Road Show  
Brooks City Base, Texas**

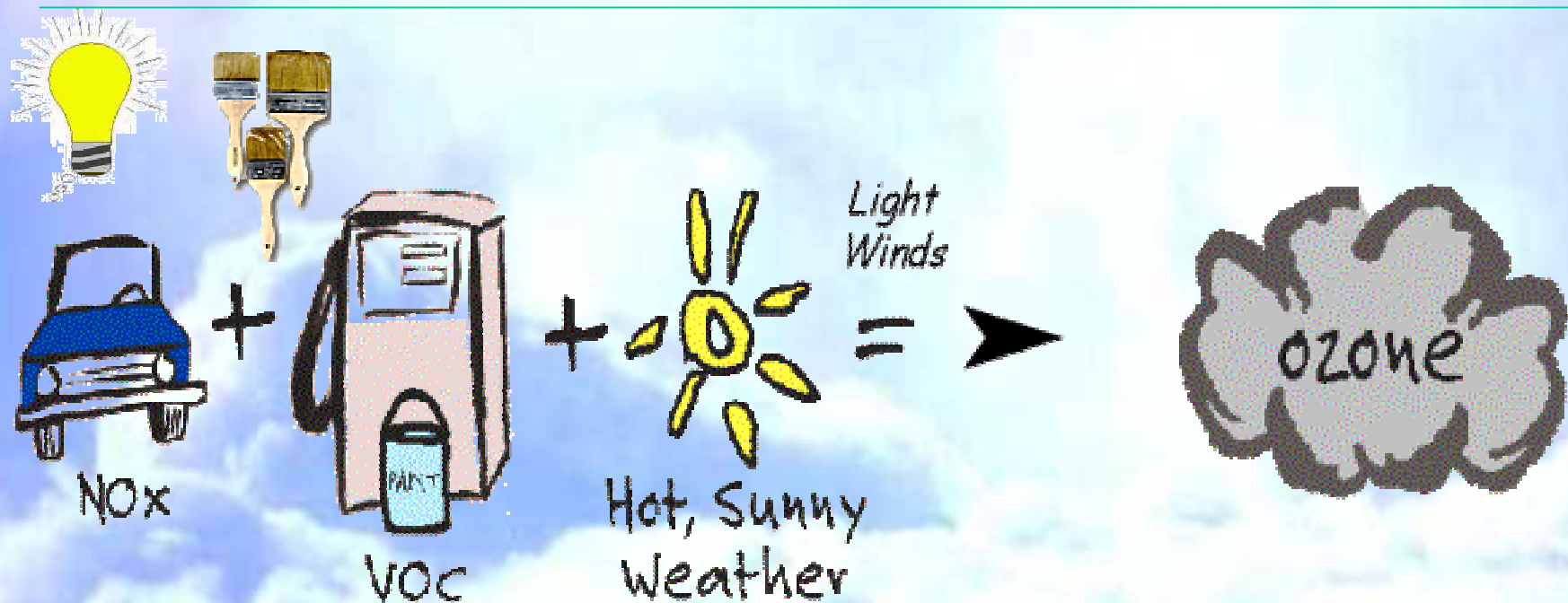
# What is ozone?

- Ozone is an odorless, colorless gas made up of 3 oxygen atoms.
- Ground-level ozone can cause:
  - shortness of breath
  - coughing or wheezing
  - headaches nausea
  - throat and lung irritation
- Ground-level ozone's effects are most profound on children, the elderly, and those with reduced lung capacity.



Graphic: EPA

# What Causes Ozone?



- San Antonio's long, hot summers make the region especially prone to ground level ozone formation.

# Background Information

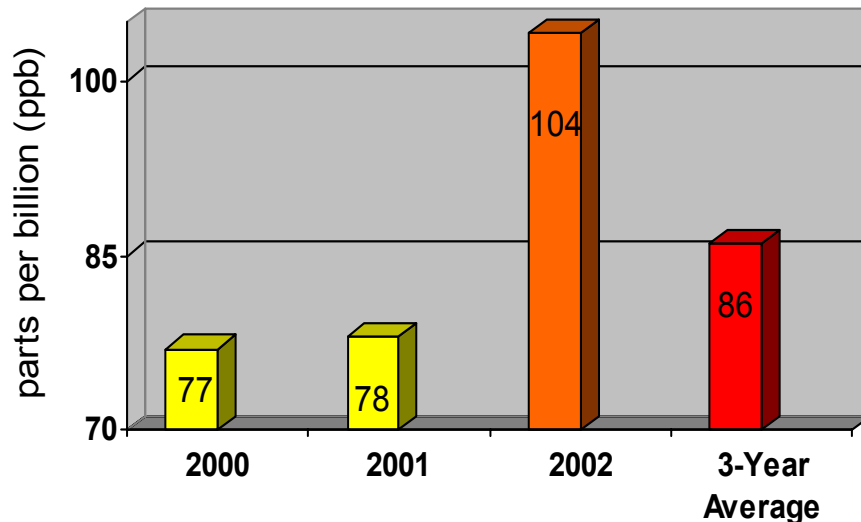
- Ozone is an odorless, colorless gas that can have harmful effects on our health.
- The San Antonio area has had levels of ozone pollution high enough to violate the standards set out by the Clean Air Act.
- In order to avoid the penalties of a non-attainment designation and clean up our own air, we have entered into the Early Action Compact and are developing a Clean Air Plan. (<http://www.aacog.com/cap/>)
- This compact mandates that we must choose (March 2004) and implement (2005) air pollution control strategies.



# Our Current Ozone Status

- National Ambient Air Quality Standard for 8-hour av. Ozone:
  - Take 4<sup>th</sup>-highest eight-hour averaged reading at each monitor
  - Calculate average of 4<sup>th</sup>-highest 8-hr. av. over three years
  - Must average below 85 parts per billion.
- The 2000-2002 average violates the EPA's ozone standards.

Ozone Pollution Levels  
2000-2002



- This violation enables the EPA to declare the San Antonio Metropolitan Statistical Area in "non-attainment."

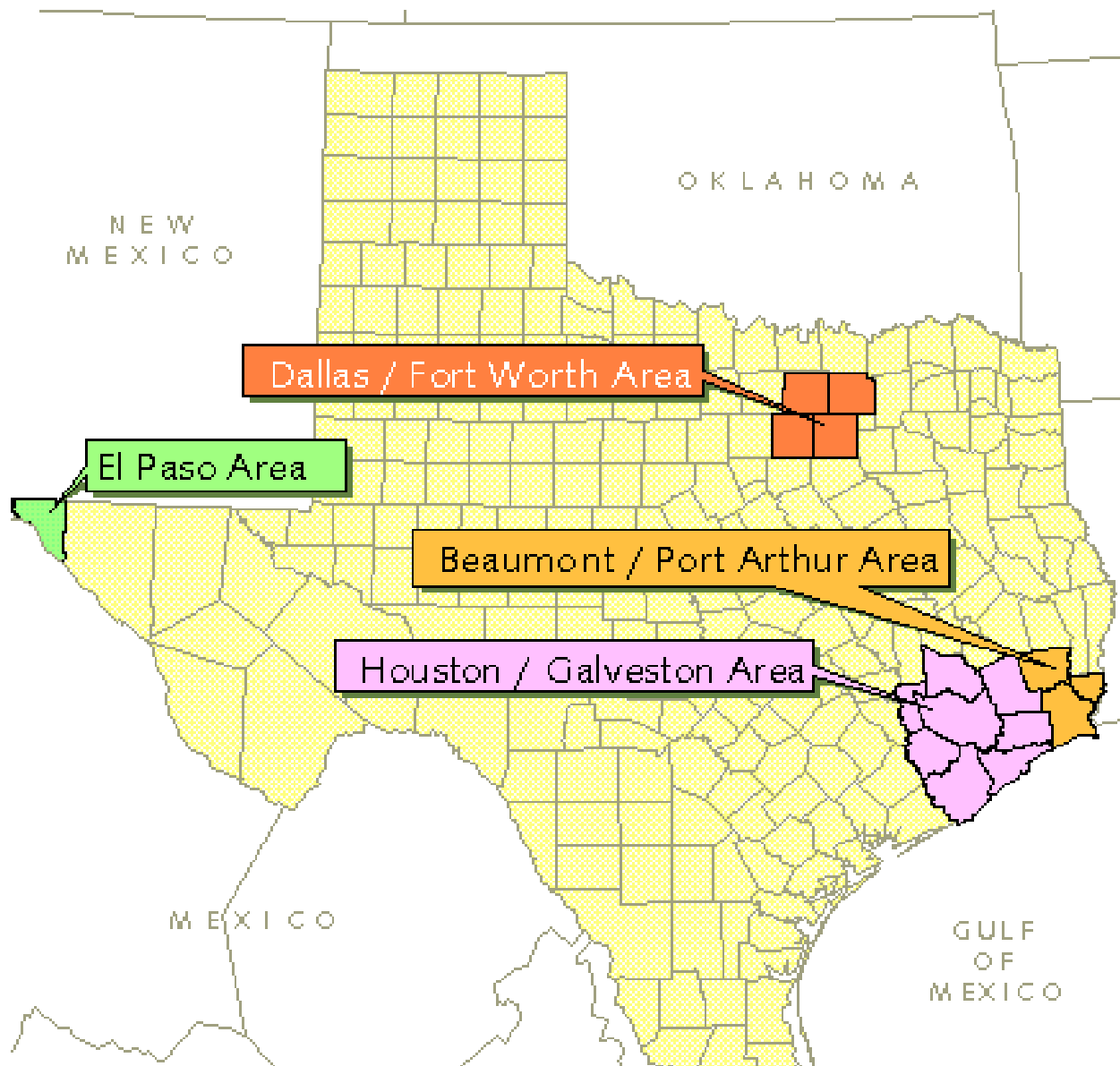
# How are the ozone pollution standards set and why?

- Clean Air Act requires the EPA to set health-based standards for seven different air pollutants, ozone is one of them.

## Quotes from the EPA:

- “In 1997 EPA revised the air quality standards for ozone to better reflect the new scientific health studies.”
- “In establishing the 8-hour standard, EPA is setting the standard at 0.08 parts per million (ppm) ...*(from)*... the 3-year average of the annual 4th-highest daily maximum 8-hour ozone concentrations.”
- “Based on recent studies, the scientific review highlighted several health effects for which the previous ozone standard did not provide adequate protection.”
- The U.S. Supreme Court reviewed this standard and upheld the science used in developing and setting it.

# 1-hour O<sub>3</sub> Non-Attainment: State Status

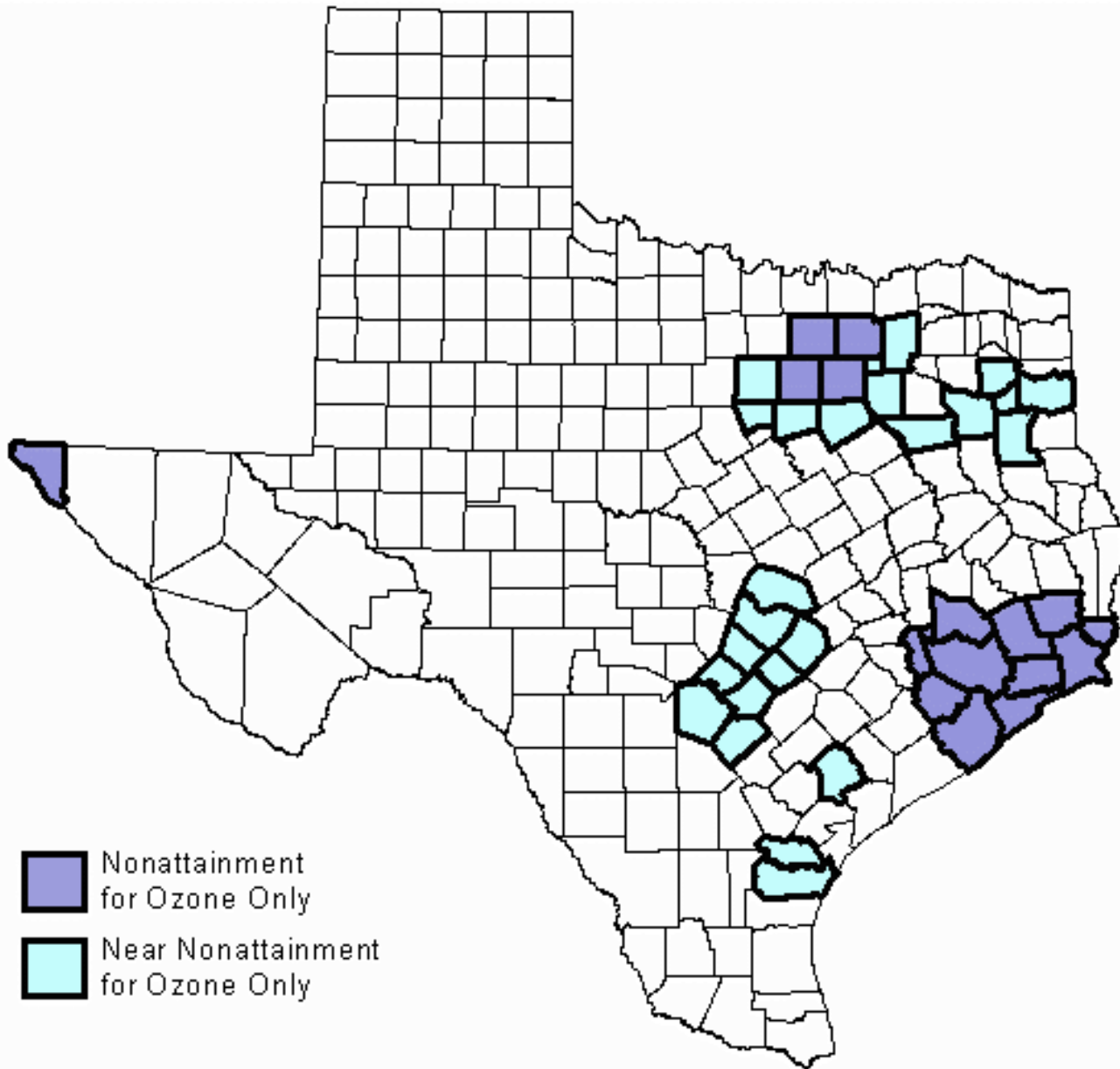


49.5% of  
the  
population  
of Texas  
lives in one  
of  
these four  
areas

Source: U.S. Census  
Bureau 2000 U.S.  
Census



# Near and Non-Attainment Areas in Texas



Add the current "NNA Areas" of SA, Austin, TLM and the total is about 70.5% of the total Texas population.

2000 US Census\*

\*[http://www.census.gov/prod/2002pubs/00ccdb/cc00\\_tabB1.pdf](http://www.census.gov/prod/2002pubs/00ccdb/cc00_tabB1.pdf)

[http://www.tnrcc.state.tx.us/gis/metadata/nonatain\\_met.html](http://www.tnrcc.state.tx.us/gis/metadata/nonatain_met.html)

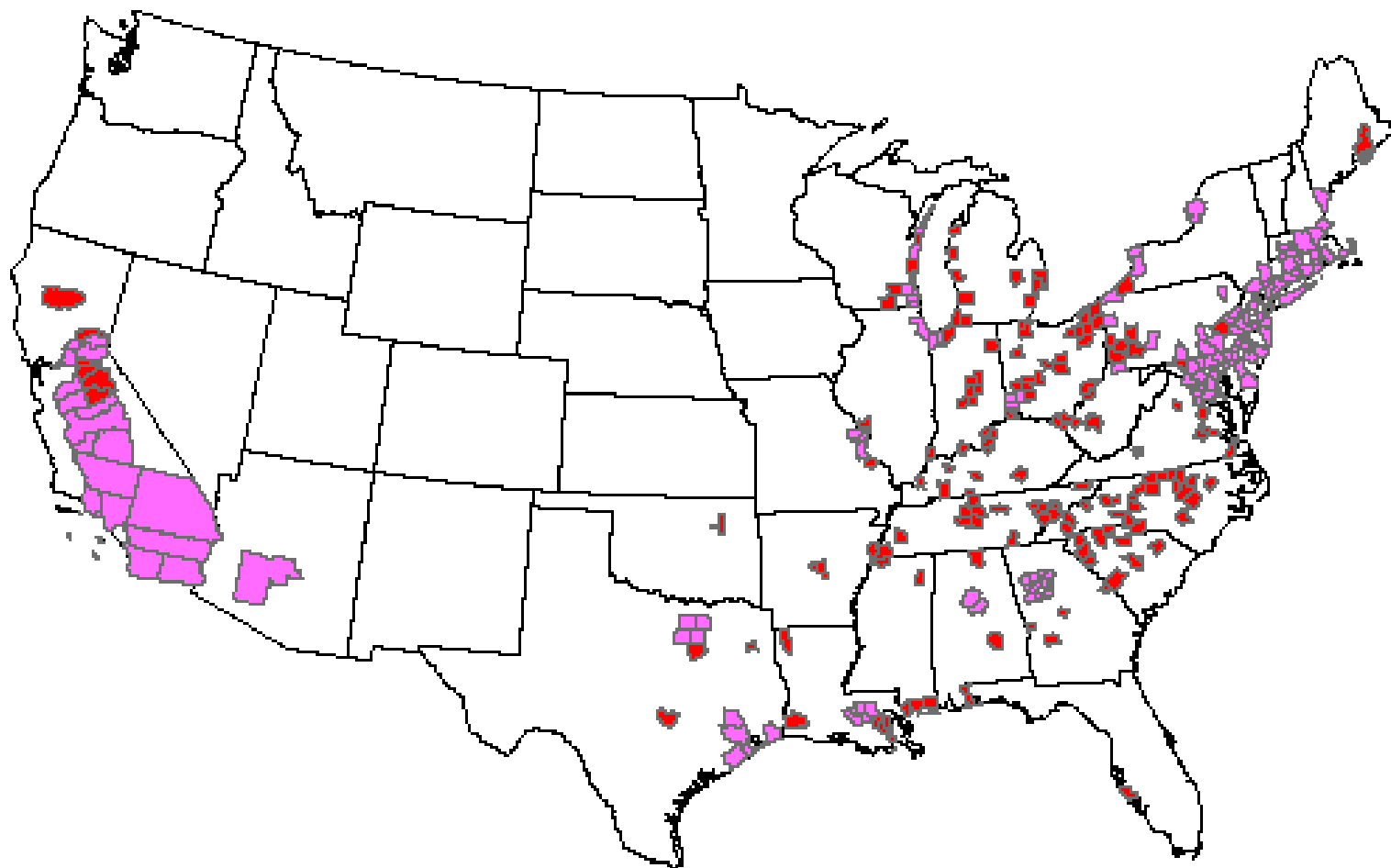


# Why are we held accountable for pollution that comes from other areas?

- Federal Clean Air Act does not allow an area to avoid penalties due to "transport" unless the transported pollution is due to an "exceptional event."
- May 1998 - Ozone caused by Mexican Smoke qualified as an exceptional event and was excused by the EPA.
- May 2003 - Smoke from Mexico generated high levels of particulate matter pollution, but not enough to violate air quality standards. Ozone pollution did not rise to significant levels.
- We protested the ozone levels recorded here in September 2002 as "exceptional events," but TCEQ could not support our position.
- Exceptions for transported pollution within the U.S. are very rare. Bottom line: no "blame game".

# Counties violating the 8-hr ozone NAAQS

## 1999-2001



- There Are a Total of 291 Counties Violating the 8-hour Ozone Standard Using 1999-2001 Data
- 155 of Those Counties Are Designated Attainment for the 1-hour Standard
- 136 of Those Counties Are Designated Nonattainment for the 1-hour Standard

[http://www.epa.gov/ttn/naaqs/ozone/ozonetech/o3imp8hr/awma\\_infoex\\_8hr\\_o3.pdf](http://www.epa.gov/ttn/naaqs/ozone/ozonetech/o3imp8hr/awma_infoex_8hr_o3.pdf)

<http://www.epa.gov/airtrends/data/AQupdate2001.pdf>

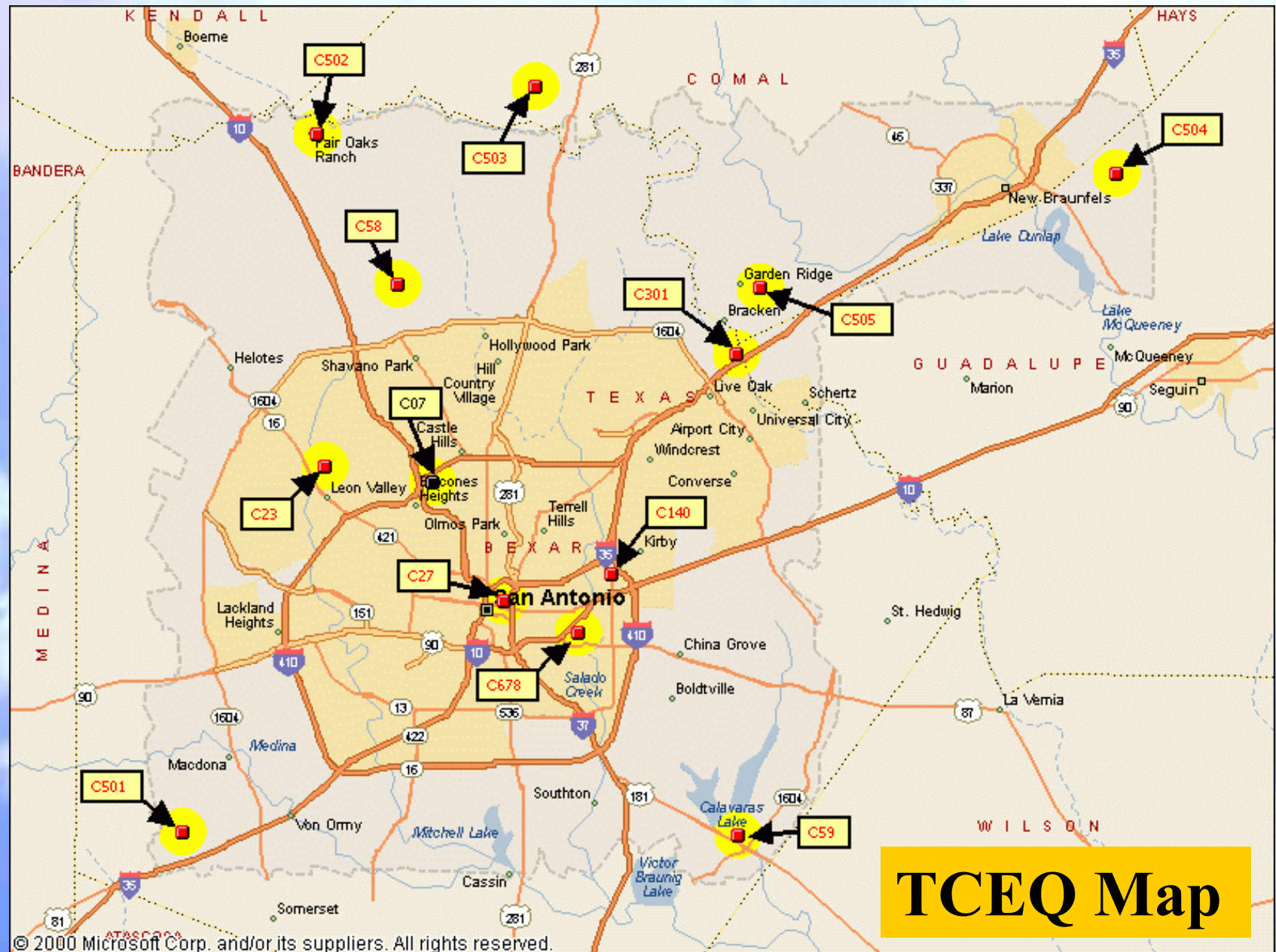


# Why are Comal, Guadalupe, and Wilson counties a part of this process?

- 1990 Clean Air Act designations are proposed for Metropolitan Statistical Areas (MSA).
- The San Antonio MSA consists of Bexar, Comal, Guadalupe, and Wilson Counties, according to Population Division, U.S. Census Bureau Internet Release Date: July 1999
  - Guadalupe County was added to the MSA in 1963
  - Comal County was added to the MSA in 1973
  - Wilson County was added to the MSA in 1993
- Idea: the commerce, transportation, movement and daily activities of people help define an integrated region that contributes to its own pollution problem by those actions. That means this region can help create its own solutions as well.



# Where are the ozone monitors?





# Where are the ozone monitors and how are they run?

## TCEQ Continuous Air Monitoring Stations (CAMS)

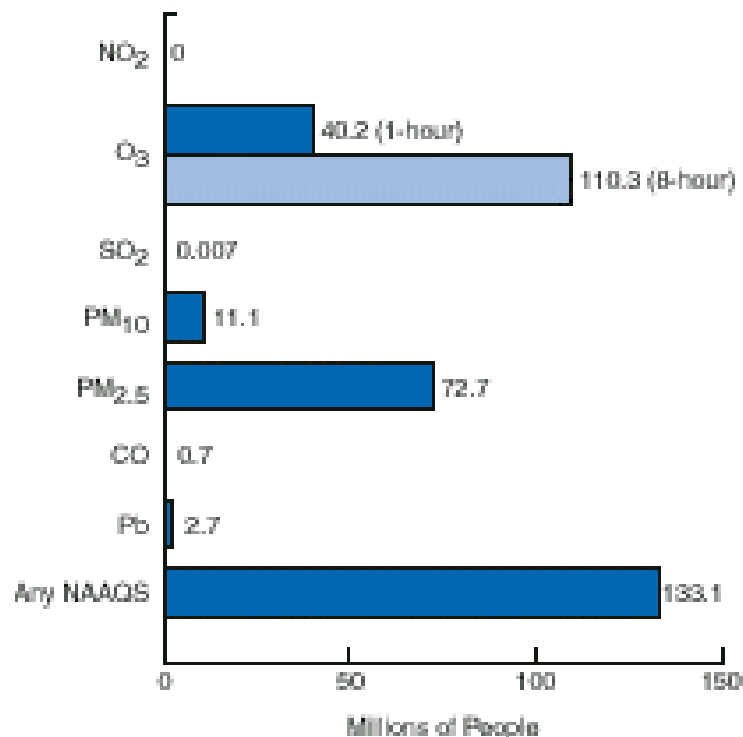
- Operated year-round
- Maintained by TCEQ (except for CAMS 678)
- *These count for non-attainment designation.*
  - *Monitors must operate for three ozone seasons before their data sets are considered for designation.*
- CAMS 23 - Marshall High School (est. 9/1996)
- CAMS 58 - Camp Bullis (est. 8/1998)
- CAMS 59 - Calaveras Lake (est. 5/1998)
- CAMS 678 - Pecan Valley (est. 3/1999)

# Where are the ozone monitors and how are they run?

- AACOG's Continuous Air Monitoring Stations
  - Operated April 1 through October 31: Ozone Season
  - Maintained by OpTech for AACOG
  - **These *don't* count for non-attainment designation.**
    - CAMS 501 - Elm Creek Elementary, SW Bexar County
    - CAMS 502 - Fair Oaks Ranch, NW Bexar County
    - CAMS 503 - Bulverde Elementary, Comal County
    - CAMS 504 - New Braunfels Airport, Guadalupe County
    - CAMS 505 - Garden Ridge, Comal County
    - CAMS 506 - Seguin Outdoor Learning Center, Guadalupe County

# A Few Ideas and Facts

Number of People Living in Counties with Air Quality Concentrations above the Level of the NAAQS in 2001



*Multiple years of data are generally used to determine if an area attains the NAAQS.*

Of the six tracked pollutants, progress has been slowest for ground-level ozone. ...the South and North Central regions experienced slower progress in lowering ozone concentrations. Despite this progress in most regions of the country, the average ozone (8-hour) levels in 33 of our national parks have increased over the past 10 years.

**Latest Findings on National Air Quality: 2001 Status and Trends**

**Publication Date : September 2002**

**<http://www.epa.gov/oar/aqtrnd01/>**

**<http://www.epa.gov/airtrends/sixpoll.html>**

# Clean Air Plan/ Early Action Compact

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- Allows the area to avoid the penalties of a non-attainment designation.
  - Local version was signed by local elected bodies on December 9, 2002
  - Signing commits the area to further study of the problem and development of timelines for implementation of solutions



# Clean Air Plan/Early Action Compact

The Clean Air Plan / Early Action Compact is an agreement between local governments within the Metropolitan Statistical Area, EPA and TNRCC.

- Local governments must agree before control strategies can be implemented.
- Web Page <http://192.168.25.6/cap/default.htm>
- **Timeline of Commitments**
  - Emissions Inventory & Modeling to Develop Action Plan for Inclusion in State Implementation Plan: 12/31/2004
  - Control Strategies Implemented: 12/31/2005
  - Maintenance Plan for Growth (projected through 2012)
  - Continuing Public Involvement: June 16, 2003
  - Attain Ozone Air Quality Standards: 12/31/2006

# How many clean air strategies are being considered?

- Currently investigating over 100 different clean air strategy options in three categories:
  - "EPA-Creditable" Strategies
  - Ongoing Voluntary Strategies
  - Potential Voluntary Strategies
- Complete copies of current lists are available
- Deadline for clean air strategy choice finalization by local elected officials in the Metropolitan Statistical Area is March 31, 2004

# How do strategies qualify for consideration?

Strategies included in plan must be EPA-creditable:

- Be **Enforceable**
- Achieve **Quantifiable** Pollution Reductions
- Be **Permanent** (for the term of the plan)

Other considerations include:

- Effectiveness
- Cost
- Area of application



# How is public input considered?

- The Early Action Compact agreement, the heart of our Clean Air Plan, requires that  
"Public reporting of assessment and progress against milestones will occur at least once every six months during the regularly scheduled, public meetings of the joined AIR Executive/Advisory Committees of the AACOG."
- However, the AIR Committee supports increased public involvement through
  - monthly public meetings
  - the meetings of the AIR Technical committee
  - this series of evening and weekend public meetings.
- Spoken comments received at this meeting are recorded and transcribed, then provided to the elected officials at the next AIR Committee meeting.
- Written comments received at this meeting, via email, fax, or mail are also provided to the elected officials at the next AIR meeting and to others upon request. Comment sheets are available



# Control Strategies (CS): What to do?

- Ultra Low Sulfur Diesel
- Alt Fuel/Elect. Ground Support Equipment
- Ban on Local Burning during AQHA days
- Inspection and Maintenance for vehicles
- If funded, diesel reduction measures through the Texas Emissions Reduction Plan:

<http://www.tnrcc.state.tx.us/oprd/sips/terp.html>

- Other CS from across the country
- June 16, 2003: Public report on CS BEING CONSIDERED due
- March 31, 2004: Finalize CS due to TCEQ

# How will final decisions be made?

- Technical committee will evaluate each strategy to determine those that

- are creditable
- will be most effective
- will be cost effective

and will then make recommendations to the Air Improvement Resources (AIR) Executive/Advisory Committee.

- AIR Executive Committee members will then debate the issues and take a proposal back to their full elected bodies.

- Only through vote of elected bodies in each of the represented areas can the clean air strategy ~~set~~ go forward for review by the TCEQ and the EPA

# Clean Air Plan Timeline

Emissions Inventory & Modeling to Develop Action Plan for inclusion in State Implementation Plan:

12/31/2004

Our regional efforts must be complete by March 2004 to allow time for state and federal review. Control Strategies Implemented:

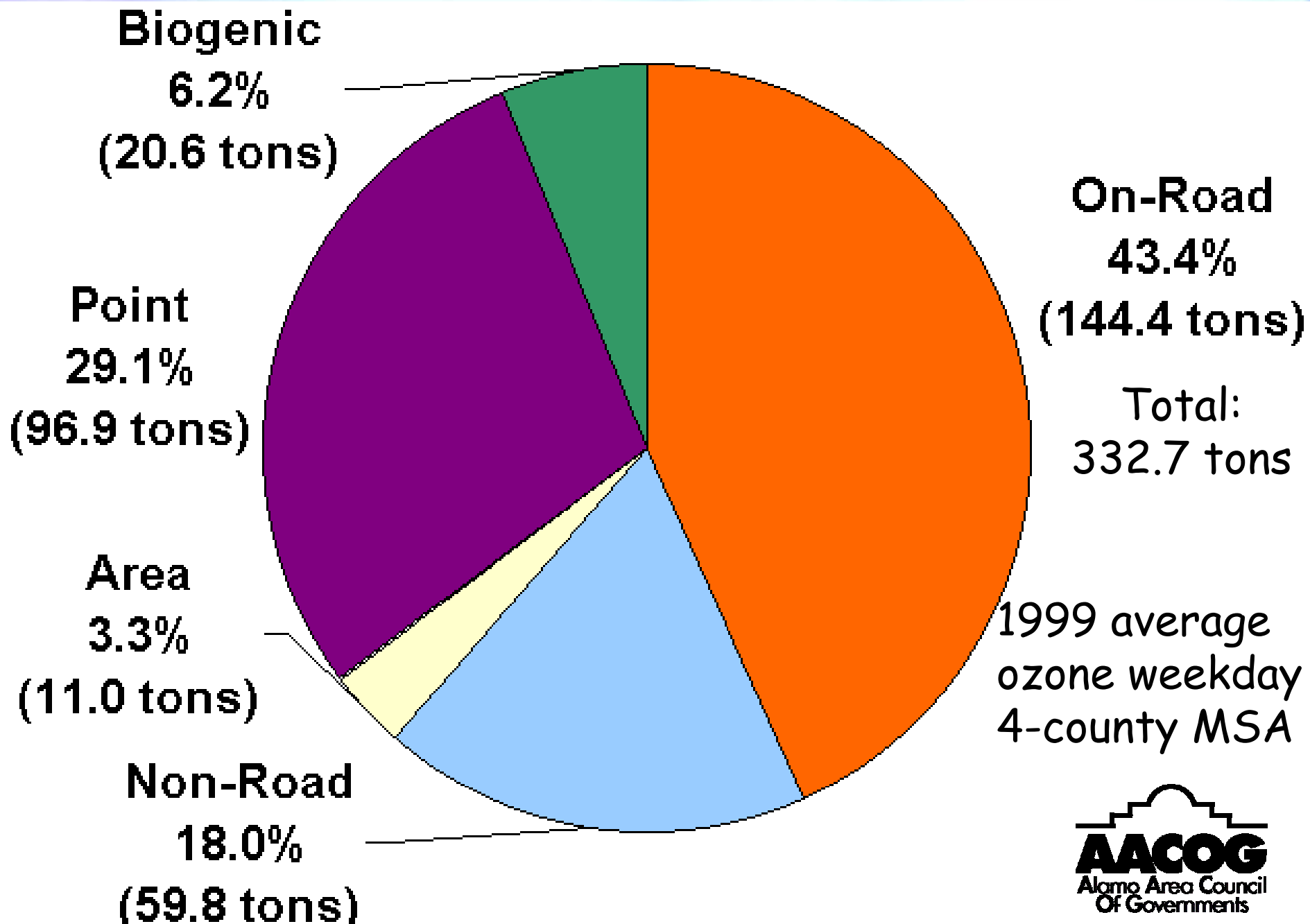
12/31/2005

Maintenance Plan for Growth (projected through 2012)

Attainment of Ozone Air Quality Standards:

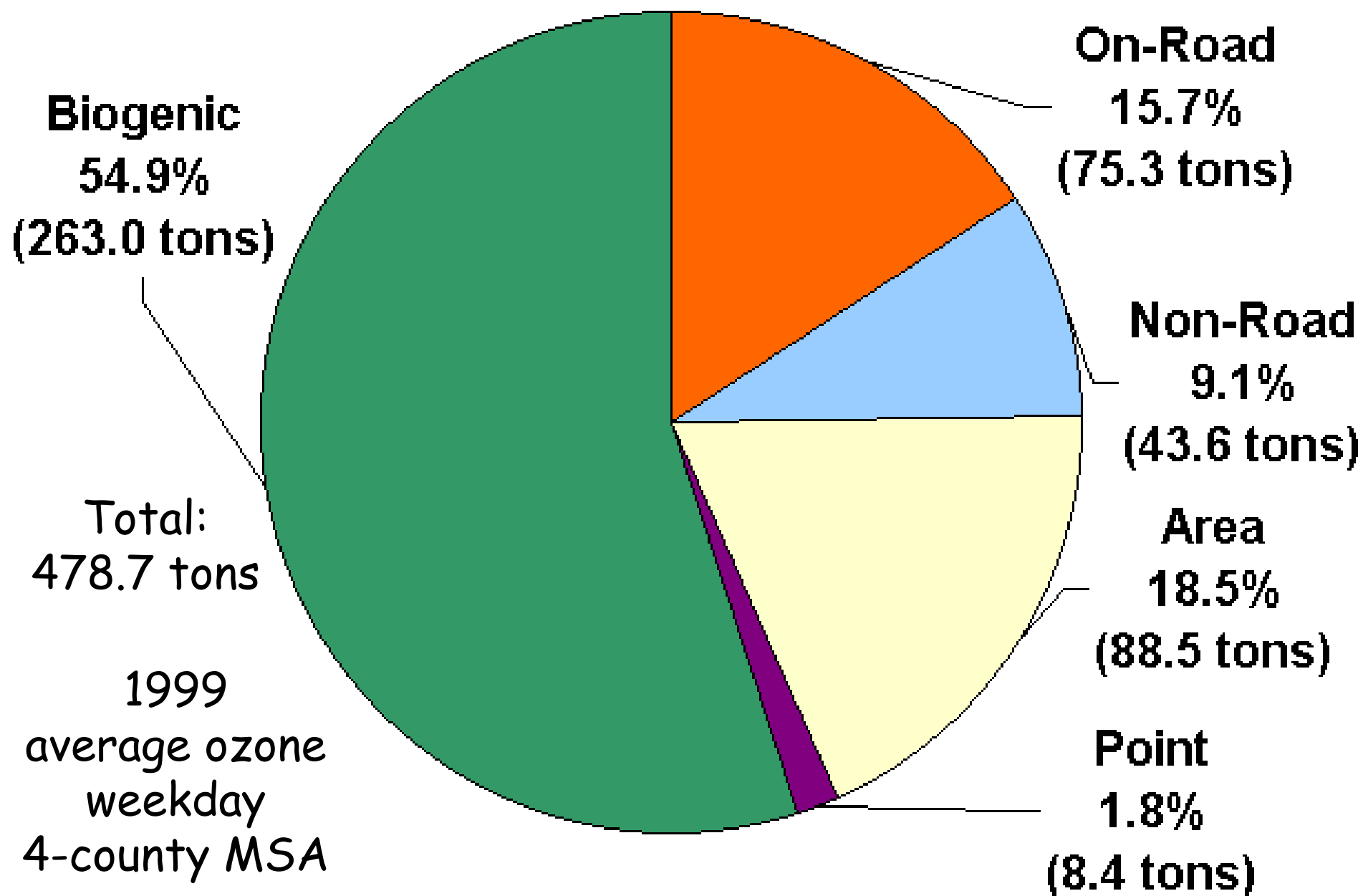
12/31/2007

# San Antonio MSA Sources of NOx



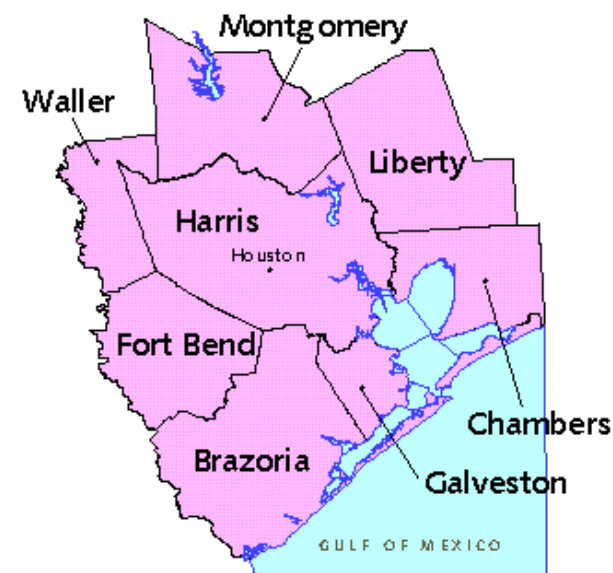
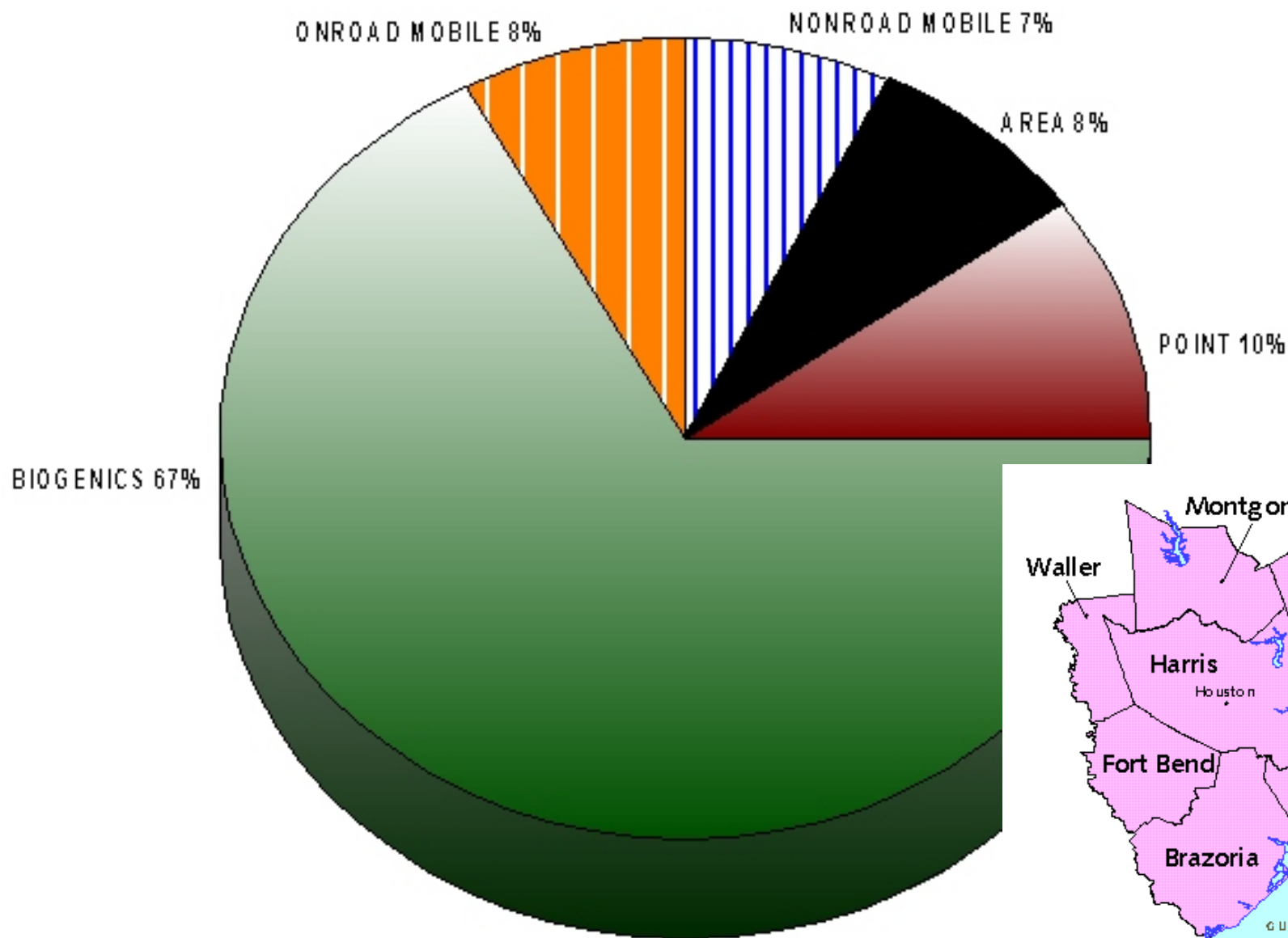


# San Antonio MSA Sources of VOC



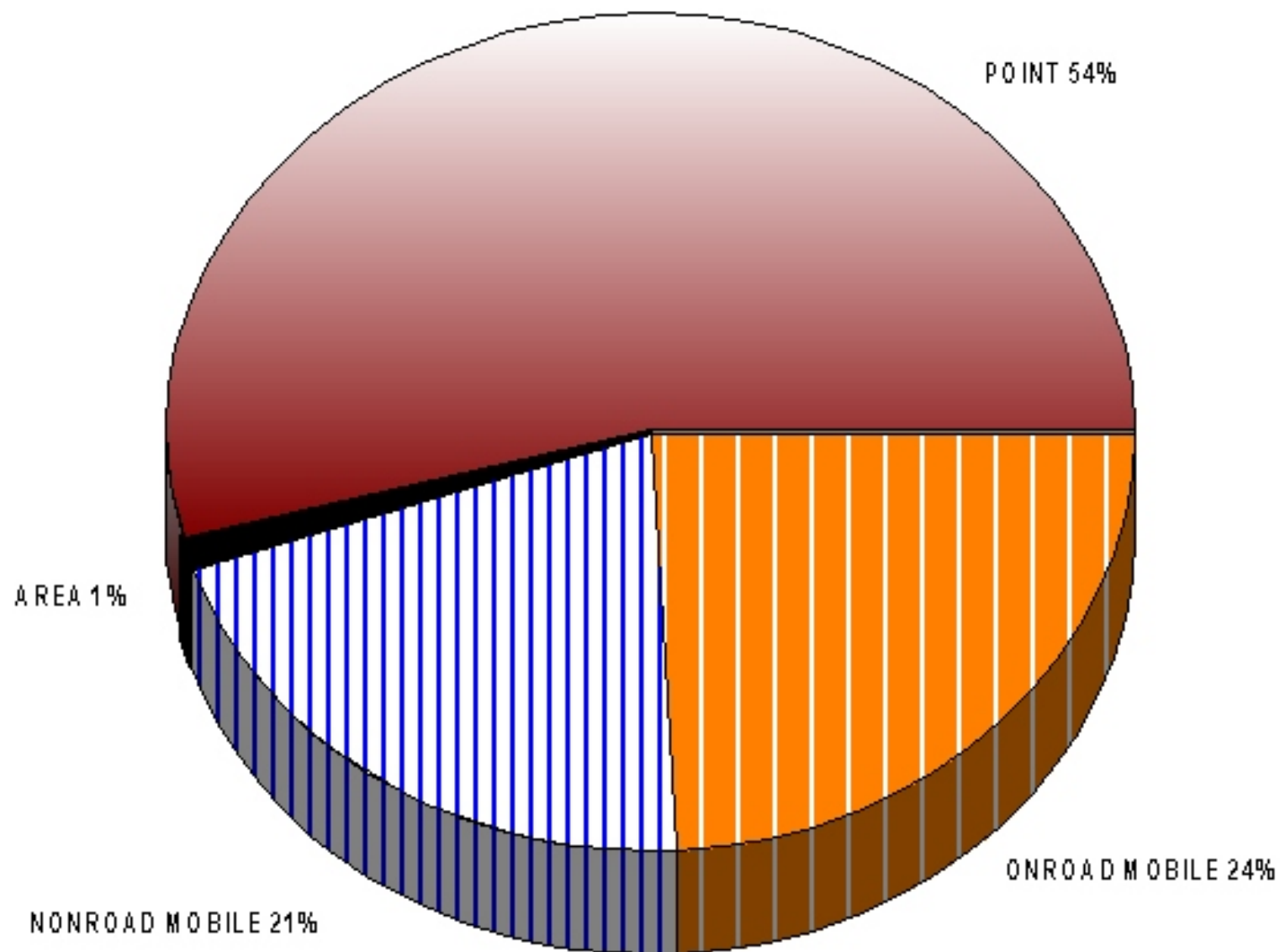
# HOUSTON/GALVESTON OZONE NONATTAINMENT AREA

1996 VOC EMISSIONS BY MAJOR CATEGORY



# HOUSTON/GALVESTON OZONE NONATTAINMENT AREA

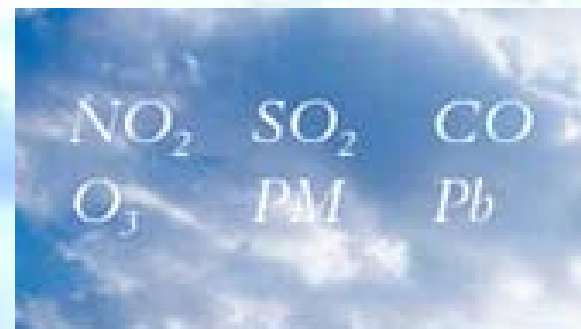
1996 NOX EMISSIONS BY MAJOR CATEGORY



<http://www.tnrcc.state.tx.us/air/aqp/ei/rsumhg.htm#noxp>

# Who Cares?

- If you are concerned with your health, You should care.
- The Congress and the EPA:
  - Clean Air Act
  - National Ambient Air Quality Standards:
    - Six "criteria" air pollutants\*
- The State of Texas
- Local Elected officials
  - Early Action Compact



\* <http://www.epa.gov/airtrends/sixpoll.html>